

Feature

Health and disease in gamebirds post antibiotics

by Dr Mark Elliott BVSc VetMFFHom MRCVS MLIHM PCH DSH RSHom

WITHOUT DOUBT WE HAVE REACHED A turning point as an industry; one I would argue is for the better.

2017 saw many vets, gamekeepers and game farmers embracing the challenge of reducing the use of antibiotics. This was a drive initiated by concerns over the growing resistance to antibiotics used in treatment of humans, but in fact a matter of common sense if we are to have a future industry anyway.

A truly staggering achievement was seen as antibiotic use overall reduced by 36% in one year, and not an easy year from a rearing viewpoint at that. This was well on the way to the targets set at the start of that year for the immediate future.

Did it all go smoothly? Well, no, in short answer it did not! Although many

producers suffered no more disease problems than before, others saw less, and a few certainly saw more; but that was to be expected.

What surprised many was how few producers were adversely affected. So why had we been using so much in the first place?

There is probably a simple historical explanation in our case, and that is the Emtryl story. Emtryl had, over time, been used to cover up many of the management and disease issues building as popularity of game shooting grew. And in this it was quite an effective medication, despite gradually having to be given over ever-longer periods in the bird's lifecycle, in higher and higher doses, to achieve the same result. Had it still been available, I believe the diseases we suffer now would have eventually overwhelmed its effectiveness and we would possibly have been in a worse position than we are today.

Emtryl set the precedent for medication of feed for birds to prevent the ramifications of disease happening. Once it disappeared, the Tetracycline class of antibiotics was found to help birds recover from motile protozoal diseases (eg. Hexamita). So the use of these in-feed became common, and, although perhaps not so effective as Emtryl, for a time these drugs seemed to work so long as good management was also put in place.

But as is the nature of things, diseases will always find a way to survive, and as these drugs then began to become less effective, so we brought in other antibiotics, and medications added to the water supply became more common. Pressure to provide more shooting did not help; for some shoots, good management principles fell by the wayside, and is probably is the reason why a few suffered more in 2017. (I have written on issues such as water quality, food, and marginal gains in previous editions of *KtB*.) For sure, from what we

discovered in 2017, much of what was done previously was either not working or not needed at all.

Micro-organisms have always had the ability to develop resistance to chemical medications. Many produce chemicals to establish themselves as dominant organisms in the environment. There is a war going on between them for dominance and survival all the time. So organisms develop resistance to chemicals produced by other species of competing organism, including natural antibiotics, and this has been going on for millennia. Antibiotic resistance is nothing new.

Many of our synthetic antibiotics are derived from the products of this battle for survival, and resistance to these antibiotics existed long before it became an issue for us.

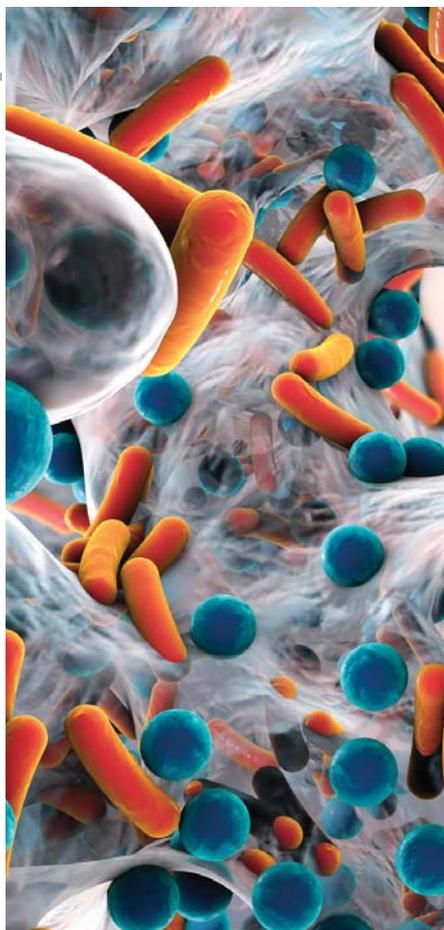
The problems for us as a species arose because we have only a very few types of antibiotic to fight many organisms that could harm us. So when we used antibiotics in situations where they perhaps were not needed, inappropriately or at inadequate doses to achieve a complete win, we created a problem. Also, we didn't think through the collateral damage and the direct effect on the individual being treated (for example, tetracyclines in overdose/use can affect liver and kidney function, even immunity). All these factors can lead to survival of the disease-causing organisms and opportunity for its subsequent development of resistance.

The same is true for wormers, coccidiosis medicines, vaccines and so on.

Responsible use means only using when necessary, and then through careful drug selection and strict dosing protocols to enhance the efficacy and reduce the risk of resistance development.

Those arguing against change point to the fact that the evidence does not condemn vets and farmers as a major cause in the UK of the antibiotic resistance problems we are seeing today.

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Doctors prescribing, as we know, is under scrutiny: they are species-specific and may be more to blame – possibly. What we do know for sure is that we must all do our bit as we really cannot be certain where faults lie.

Rather than seeking to blame or fight change, we all need to ask what can we learn from the past, and how can we improve further.

For the game industry, we need better understanding of the diseases we encounter, the lifecycles of the organisms we treat, the environmental and other external factors that make a difference, and a better understanding of how we can effectively treat the problems and with what medications as they arise.

It is ironic that problems create opportunity, and the loss of Emtryl led to good work and greater understanding of the management needs of the industry. Meanwhile, a small number of specialist vets evolved to meet the demands for diagnosis and treatment that the re-emergence of disease problems created.

Some of these vets and scientists from the GWCT met recently to set up a

steering group to identify and develop targeted research into the various diseases. To achieve significant further antibiotic reductions, we need answers to the industry's problems as quickly as practically possible. Unfortunately, the game industry is too small to attract funding from large pharmaceutical companies, and to sell less antibiotic is not in their financial interest, so all initiatives will need to come from within. That means from those enjoying the sport created as they are top of the money tree; all other stages are already pared to the bone to keep the cost of shooting down.

The vets involved all realise they may be working to reduce the need for their services in the long run. However, the most effective way to save game shooting long-term is to understand, to be able to treat effectively and quickly, and to move forward. Fire-fighting issues as they arrive, relying on hope rather than expectation of success, is much more likely to lead to disaster.

So when you see a call for funds later in the year, please be prepared to help out. The future is what counts, not the past.

NOTE IT!

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